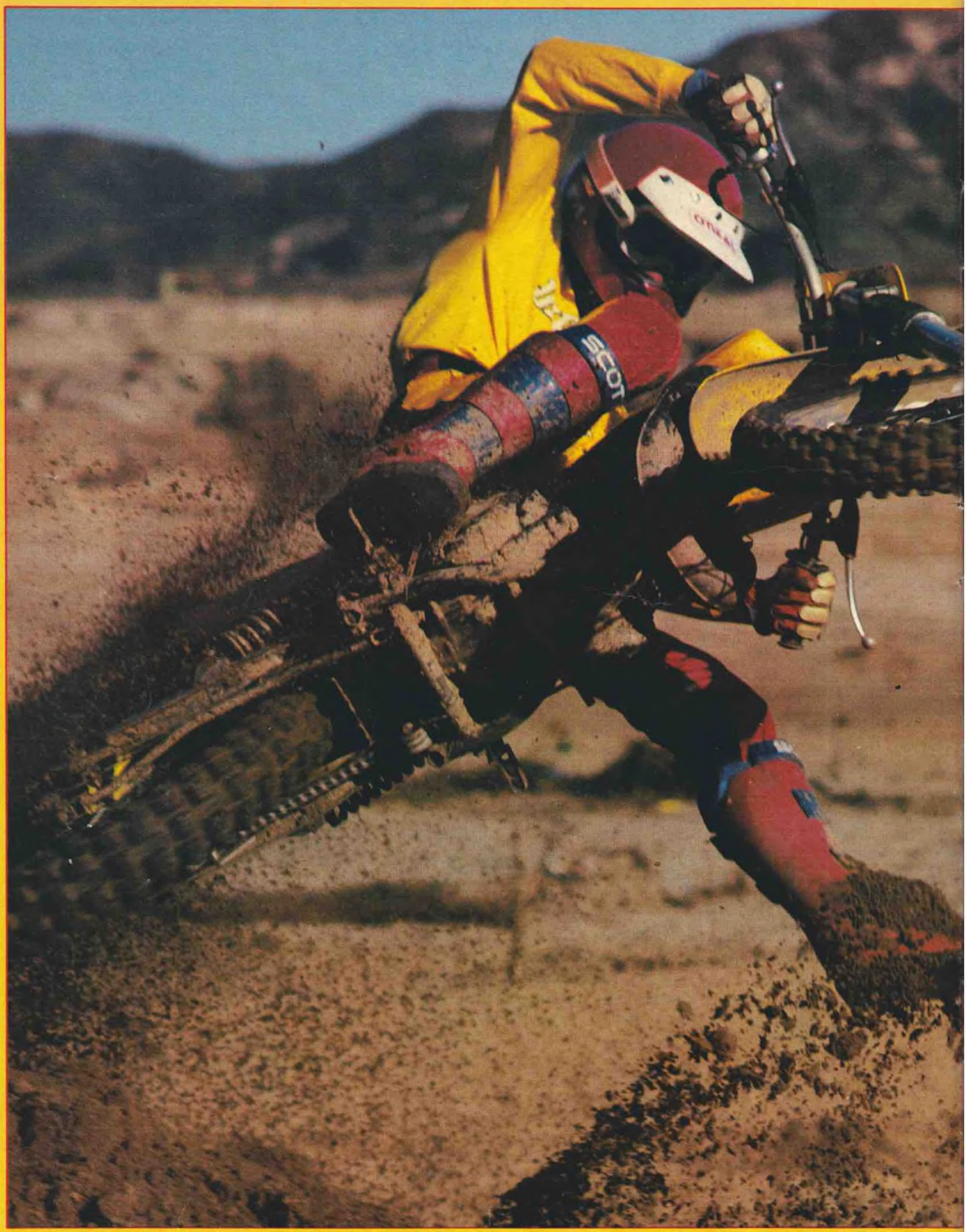
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SUZUKI RM400T MOTOCROSSER

TAKE YOUR CHOICE: MILD OR WILD

You really don't need to change it, but you probably will anyway

By the Dirt Bike Staff

We've got a genuine split personality here. A regular Doctor Jekyll and Mister Hyde. You see, the 1980 RM400 is a very mellow bike in standard trim. It has a nice spread of power from the bottom of the rpm range all the way to the top. No surprises anywhere. Twist the throttle a bit and you get a bit more power. Yank it wide open, and the power starts to churn and chug out in a nice, strong, predictable manner.

However, if you've got a bit of spare time and access to a set of torches, you can change the RM into a blazing monster capable of pulling holeshots on a YZ465 Yamaha. And it couldn't be simpler.

All you have to do is remove the plate in the belly of the expansion chamber. This means that you have to first cut the pipe in half . . . a frightening prospect to some. The plate is located near the rear of the belly, right before the pipe starts to taper down. It's not important exactly where you cut the pipe open. Anywhere near the plate will allow you to get it out. Once the pipe is open and gaping before your very eyes, you can take a sharp chisel and a hammer and tap the plate loose. Then, simply re-weld the pipe and go riding. Chances are you won't even have to re-jet. We know of three riders who have done this to their new RMs and only one had to raise the needle position to richen up the mid-range.

You might be asking the more than obvious question right about now: Why didn't Suzuki merely leave this plate out when they built the bike?

Probably because only a small handful of riders need any more power than the standard "detuned" version of the 417cc engine puts out.

Still, if you want some thrills—and probably slower lap times—go right ahead and take the plate out. Test rider Ken Zahrt has been racing a 400 RM for about a month now and he likes the bike with the plate cut out. In one Open Expert race, Zahrt pulled two clean holeshots against a field of big YZs and Maicos. So far, he's garnered a string of wins and seconds.

One last thing before you light off the torches. If you take the plate out of the pipe and get the huge horsepower increase, the way the bike handles will be greatly affected. With the stock pipe, you can have the bike heeled over and hit the throttle fairly hard without disastrous results. Do this with the modified pipe, and the rear end of the bike will leap out and stuff you into the ground. You must have the big RM straight up and down when the throttle is nailed.

Riding it stock

The RM is easier to ride aggressively with the pipe untouched... you already know that. You can feel the weight of the RM—it's no feather. With a half tank of gas, we tipped the scales at 239 pounds. Dry weight is claimed at 227 pounds, and based on the weight of the gasoline, oil in the forks and gearbox, it's a fairly honest number. We also had an RM250 with us at times during the testing and it felt like a mini-bike compared to the 400, even though there's not that much difference in the weight of the two bikes.

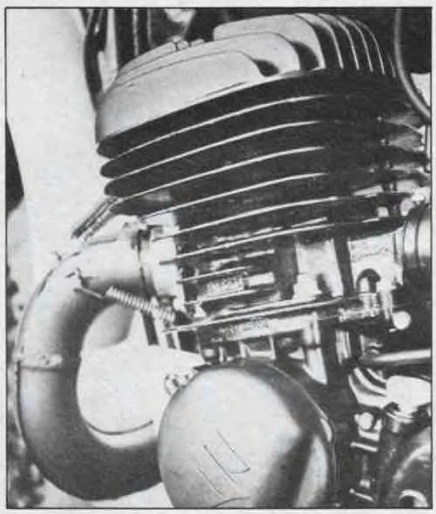
To get the RM400 around corners in the most efficient manner, it's best to use a lip or a berm, rather than to go for the tight, inside line. The front end of the bike will push outward when cornering on flat ground, unless the traction is perfect.

A rider has to move around a lot to get the front end of the Suzuki to bite for cornering. It's necessary to get right up on that gas tank *and* to place a foot well forward to load the front wheel as much as possible.

As soon as the turn is accomplished, the rider will quickly have to get his weight back, then roll the throttle on. If the throttle is rolled on with the weight still forward, the rear wheel will spin uselessly. The only thing that makes the necessary weight shifts a bit difficult is the extreme width of the bulging side panels. Riders with plastic boots will notice this more than those who wear leather. Even with slightly bowed legs, no more than half of the sole can be placed on the peg.

You'll find that the pegs are rather far forward on the RM, compared to something like a YZ. This does two

Pipe stuck out a bit and toasted the legs of test riders.



Marvelous motor. It can be mellow or frightening, depending on your needs.

things. It makes it a bit more difficult to stand up on the RM, but it also makes the bike a great jumper. To loop out on the RM while jumping would take a complete lapse of concentration. Most of the time, the big RM will jump flat and nicely under control, with only a slight tug needed on the bars before landing to bring the front end up to the correct attitude.

Because the Suzuki is very tall, with a high peg location and lots of ground clearance, some top-heaviness is felt when leaning the bike over. A bit of force will be needed at times to stuff the front end down and into the desired groove.

We found that, as with most new generation tall bikes, the RM turns best with lots of power. In fact, with the rear wheel spinning under power, a skilled rider can place the front wheel with a fair degree of accuracy.

Riding it modified

All of the above applies, except for one slight thing: A great deal of caution and forethought is required when riding the RM400 with the modified pipe. In many instances, there's so much more power that you can actually work a corner one gear higher than with the standard pipe. While wheelstands are no problem on short straights, getting traction is. When the knobbies are fresh, the Bridgestones hooked up OK, but once the edges got the least bit rounded, a lot of potential forward thrust was wasted in slewing from side to side. Eventually, we ended up with a

SUZUKI RM400T
Specifications

NAME AND MODEL	Suzuki RM400T
ENGINE TYPE	Two-stroke, case reed valve, single cylinder
BORE AND STROKE	80mm x 83mm
DISPLACEMENT	417cc
HORSEPOWER (CLAIMED BY FACTORY)	N/A
CARBURETION	Mikuni 36mm
FACTORY RECOMMENDED JETTING:	
MAIN JET	270
NEEDLE JET	R6
JET NEEDLE	6FJ6-3
PILOT JET	50
SLIDE NUMBER	2.5
RECOMMENDED GASOLINE	Premium
RECOMMENDED OIL (MFR.)	Suzuki CCI
FUEL TANK CAPACITY	8.5 liters (2.2 gallons)
FUEL TANK MATERIAL	Plastic
GAS/OIL RATIO	20:1
LUBRICATION	Pre-mix
AIR FILTRATION	Foam element
CLUTCH TYPE	Wet, multi-disc
TRANSMISSION	Five-speed, constant mesh
GEAR BOX RATIOS:	
1	2.0
2	1.6
3	1.2
4	1.0
5	0.8
GEARING, FRONT/REAR	N/A
IGNITION	PEI
PRIMARY KICK SYSTEM?	No
RECOMMENDED SPARK PLUG	NGK B8EGV
SILENCER/QUALITY	Quiet for a racer
EXHAUST SYSTEM	Up-pipe, expansion chamber
FRAME, TYPE	Single downtube, chrome moly tubing
WHEELBASE	1445mm (56.9 inches)
GROUND CLEARANCE	365mm (14.4 inches)
SEAT HEIGHT AT TANK	990mm (39 inches)
STEERING HEAD ANGLE	29[illegible] degrees
TRAIL	123mm (4.84 inches)
WEIGHT WITH ONE GALLON GAS	103 Kg (239 pounds) 227 dry
RIM MATERIAL	Aluminum alloy
TIRE SIZES:	
FRONT	3.00x21 4pr knobby
REAR	5.10x18 4pr knobby
SUSPENSION:	
FRONT, TYPE AND TRAVEL	Leading axle oil/spring fork, 11.2 inches
REAR, TYPE AND TRAVEL	Swingarm/gas-spring shocks, 11.8 inches
INTENDED USE, MFR.	Off-road, motocross competition
COUNTRY OF ORIGIN	Japan
PRICE, APPROX.	$1999
PARTS PRICES, HIGH WEAR ITEMS:	
PISTON ASSEMBLY, COMPLETE	$38.51
RINGS ONLY	$8.33
CYLINDER	$161.30
SHIFT LEVER	$10.96
BRAKE PEDAL	$14.42
FRONT SPROCKET	$11.05
DISTRIBUTOR:	U.S. Suzuki, 13767 Freeway Dr., Santa Fe Springs, California
OVERALL RATING, FROM 0 TO 100, VARIOUS CATEGORIES, KEEPING INTENDED USE OF MACHINE IN MIND:	
HANDLING	90
SUSPENSION	96
POWER	95 stock, 99 modified
COST	95
ATTENTION TO DETAIL	96
EFFECTIVENESS, STONE STOCK	94

Kenny Zahrt, flying high on the RM400.

There's this nifty section at Sunrise Cycle Park. Naturally, KZ had to showboat over it.

massive 5.10x18 Terra-Flex on the rear and the ever faithful Metzeler on the front. Most of the front end pushing went away with this slight change and the gnarly Terra-Flex on the rear got appreciably more bite than the standard tires.

With the modified pipe, it might be wise to consider a larger countershaft sprocket. Slipping a 15-tooth item in place of the stock 14 gives each gear a longer range and smooths out the delivery a bit, making traction somewhat easier to obtain.

In fact, the whole key to riding a modified RM400 properly is to get the bike to hook up. There's such a surplus of power that discretion and careful selection of lines will get you better results than indiscriminate handfuls of throttle.

However, twisting the loud handle is undeniably fun. You can throw up huge shovels of dirt in each and every gear. Climbing any hill is just a matter of selecting a gear and playing with the throttle. You should never run out of power, even in deep, wet sand or muddy conditions. In a nutshell, there's more than you'll ever need, everywhere.

Suspension, front and rear

Most of what we mentioned in the RM250 test holds true for the 400, with the exception of running a touch more air in the forks and more preload on the shocks. The greater power output of the big bike demands a firmer action front and rear to work right.

We ran the lightest oil we could find in the forks and got a good, smooth stroking set of legs. We had to set the rebound up to firm in the shocks, as the bike was delivered with a light setting. This is easily accomplished without special tools. The excellent owner's manual spells out how to do this in a clear and simple fashion. In fact, Suzuki must be complemented on giving the rider one of the most sensible and well-written owner's manuals around.

Bits and pieces

Servicing the air filter was no problem. A roomy still air box is fairly water resistant. We made a half dozen blasts through a two-foot deep stream with no drowning out.

Control levers are old fashioned and not as easy to reach as the spiffy contoured levers of much of the competition.

We had the inner liner on the throttle cable work its way out of its outer housing and cause the throttle to stick partially open. We also experienced this on a 125 and a 250, which both use basically the same cable. Some change is needed here.

There's a funny square shape to the rear of the saddle that hits the rider in the inner thigh when he's standing with his weight well back. A bit of rounding off in this area would be appreciated.

Shifting on the RM was smooth, with no problems, and neutral was fairly easy to locate, even with the engine running. This was helpful, as the big RM does not share the primary kick-starting feature of its smaller brothers.

Getting a foot over the kickstarter, while seated, took a contortionist's skill. It's located so high that the rider ends up with his knee next to his face. Most awkward.

Starting always seemed to take three or more kicks, hot or cold. Once the bike started on the first kick and it scared the hell out of everybody.

As with our RM250, we had some problem with vibration and smallish motor mount bolts. Everything must be kept tight, including the steering head and swingarm pivot, or the engine will shake around in the frame like a spastic flamenco dancer.

We had no leaks from fork seals, gas cap, or the engine. Everything stayed nice and dry throughout the test.

There should be some sort of a small heat shield on the belly of the pipe. A few riders complained about hot legs.

Brakes worked just fine at both ends. The front was good and strong, with a very smooth and progressive feel to it.

The exhaust sound was not the typical irritating bark of a large two-stroke. An almost muted note came from the long RM muffler. Good.

Quality of the plastics was first rate and the RM is a handsome bike. Accessory manufacturers are going nuts trying to invent things to put on this machine.

That massive and sturdy aluminum swingarm seems to have become a Suzuki trademark. No one makes a better arm, to the best of our knowledge. It's flex-free and light.

How's it stack up?

The big RM is the only bike around that gives you the option of sensible, Open class power, or a simple switch to an uncontrollable missile. Which way you should go depends on your personal level of craziness. Actually, most riders will probably turn better lap times on an RM250, but very few open bikes are bought for sane reasons like racing. Most of them are used as fun bikes, with the occasional race thrown in now and then. Other Open bikes are easier to turn, but the RM sure gives the rider a lot of motor for the money. With or without the modified pipe. □